

The Gray Herbarium of Harvard University.

No one need be told that this is the largest and most valuable collection on this continent. For its beginnings we must look to the collections begun by Dr. Asa Gray while a student at Fairfield Medical College in the year 1828. When Dr. Gray was called to a professorship in Harvard College he found no collections of dried plants. Such as had been made by previous incumbents had been considered as personal property. The collection which Dr. Gray had got together up to this time amounted to between four and five thousand species, including many European and arctic American specimens procured from foreign correspondents.

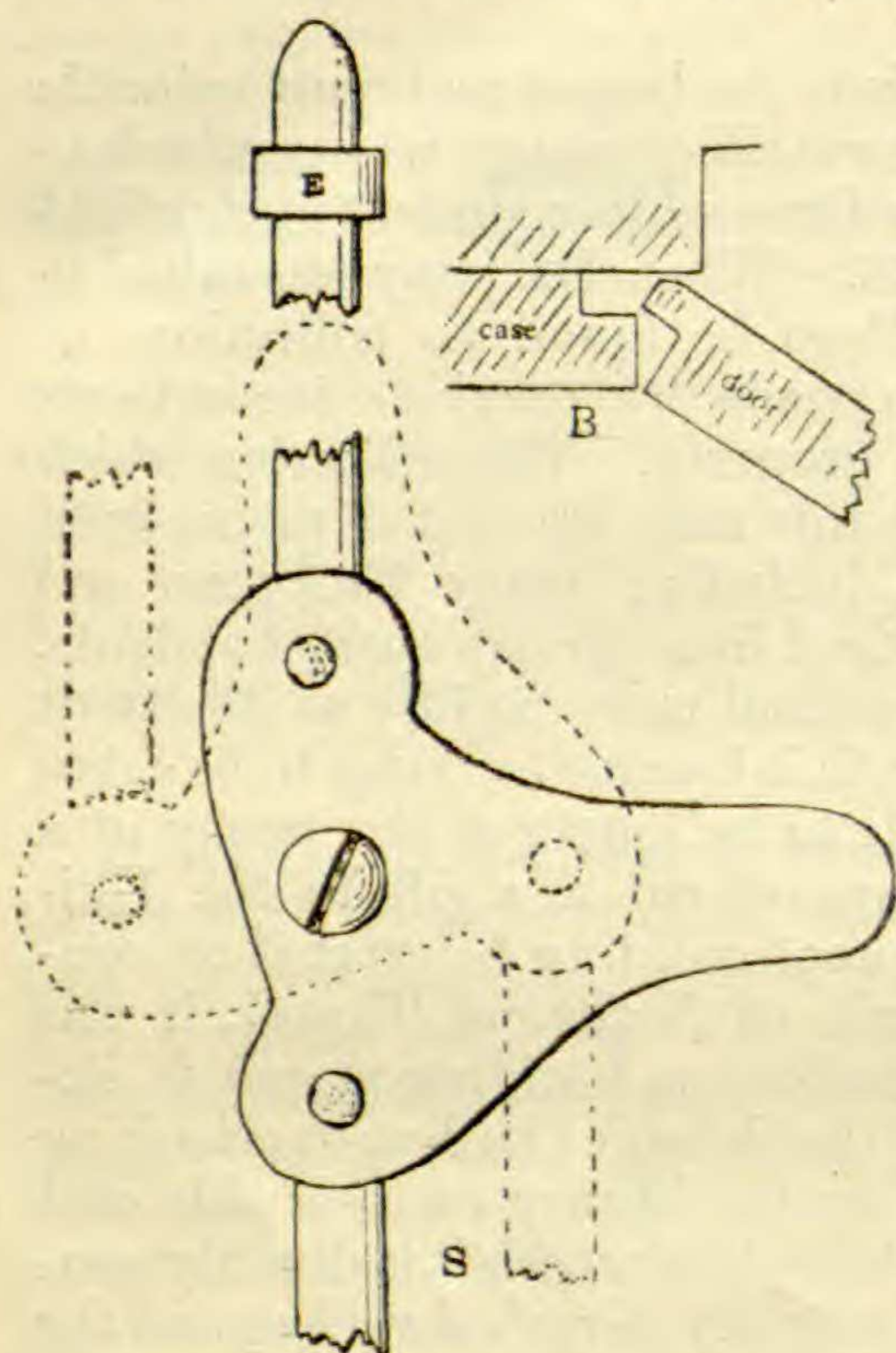
This collection increased, more and more rapidly as its extent and scientific value increased, until it became too large to be cared for by its owner and too valuable to be longer at the mercy of a frame house. Consequently it was offered as a gift to the University on condition that a fire-proof building be erected to contain it. In this building, the gift of Nathaniel Thayer, it was placed in the year 1864. The herbarium building proper is situated on a terrace in the midst of the Botanic Garden, overlooking a large part of it, and is flanked by the library on one side and the laboratory on the other, with both of which it is directly connected as these are respectively with Dr. Gray's dwelling and the greenhouses.

The herbarium occupies the main room, about thirty-five by twenty-five feet, with walls twenty-five feet high. The room is lighted by a very large double window (the full height of the walls) looking to the north-west, and by a sky-light in the center. The walls to the height of sixteen feet are practically covered with cases, a balcony giving access to the upper tiers. Besides these there are five floor cases, the three largest of which contain the Compositæ. The total capacity of the cases now in place is somewhere near 350,000 sheets, allowing for an average number of genus-covers. It is impossible to estimate with any accuracy the present extent of the collection. It is probably equal to two-thirds or three-fourths of the total capacity. This rough guess does not include the Sullivant herbarium of mosses nor any of the other collections of lower cryptogams in this building.* The records kept for the last sixteen years show that the average annual additions to the herbarium are 6306 sheets.

The wall cases are of the usual form and are closed with ordi-

*The large Cryptogamic herbarium of Dr. Farlow is in the Agassiz Museum building.

nary doors, with common spring-catches in the middle. But the



DOOR FASTENING FOR HERBARIUM CASE.

S, door-catch, as seen from inside when door is closed. E, eye, which holds rods in place. The dotted line shows the position of catch when door is opened. B, section of door and case, showing relations of tongue and groove.

floor-cases may be taken to represent the best that can be constructed in the light of Dr. Gray's extensive experience and long observation. They have the important advantage of being out of contact with walls, a point to be strenuously insisted upon. No matter how dry the room, dampness will surely result if the cases are directly against a brick or stone wall. These cases are of ash, about eight feet high, each containing four compartments divided in the usual manner. These are closed by doors whose construction and fastenings are shown in the accompanying figure. The hinged edge of the door is provided with a tongue which fits into a corresponding groove in the case (B) when the door closes. The fastening, as seen from the inside (S), consists of an irregularly three-pointed piece of brass to the short ends of which are pivoted two blunt-pointed steel rods, reaching to the top and bottom of the door, near which they pass through guiding eyes, E. The longer free tip of the brass piece engages with a slot on the side of the case and the rods enter brass sockets in the case above and below the door. The pointed tips of the rods and the outer beveled surface of the middle catch cause the door if it becomes warped to be drawn forcibly into place as the handle is turned. Thus at all times it is drawn snugly against the case. This compulsory contact for its whole length, together with the tongue and groove arrangement at the hinged edge of the door comes as near excluding dust and insects as can be done consistently with facility in opening and closing.

The herbarium has a small endowment, which provides for limited expenses. No one could do botany a greater service than to provide an endowment which would permit the employ-

ment of special students to assist in working up the wealth of material accumulated. Since its transference to the custody of the University the herbarium has had but two curators, the late Charles Wright and Dr. Sereno Watson.

National Herbarium at Washington.

GEORGE VASEY.

This Herbarium was organized in 1869. It was based upon the Government collections which had for many years been accumulating in the Smithsonian Institution, from which they were transferred in the original packages to the Department of Agriculture, to be prepared and mounted, so that they might be accessible for investigation. These collections were principally as follows:

Those of the U. S. Exploring Expedition under Commodore Wilkes from 1838 to 1842. Those of the U. S. North Pacific Ex. Expedition under Commanders Ringgold and Rogers from 1853 to 1856. A small lot from Commodore Perry's Expedition to Japan in 1856. A portion of Fendler's collections on the Isthmus of Panama in 1850. A collection of Berlandier's plants of Texas and Mexico, made from 1828 to 1830. Lindheimer's Texas Collection of 1846. The large collections of Mr. Charles Wright in Texas and New Mexico from 1849 to 1852. The Collections of the U. S. and Mexican Boundary Commission, and those of the Surveys for Railway route to the Pacific made in 1853 and 1854 by Lieuts. Whipple, Parke, Williamson, and Fremont, and Gov. Stevens of Oregon. A collection made by Lieut. Ives on the Exploration of the Colorado River in 1857 and 1858. Collections made in Alaska by Dr. Rothrock, Dr. Kellogg and others.

Of foreign collections, numerous packages contributed by the Imperial Botanic Garden and Herbarium of St. Petersburg, containing not only plants of Russia, Siberia and Turkestan, but also many from Brazil and Japan. Numerous packages mostly of European plants, from the Royal Herbarium at Kew, England. Other European collections from Paul Reinsch and Mr. A. Schott of Germany, Mr. Karl Keck of Austria, Dr. Lager, Switzerland, and Prof. Boeck of Norway. The large and valuable Cuban collections of Mr. Chas. Wright in 1865 and 1869. The collections of the San Domingo Commission in 1871.

To these have since been added the plants collected under the